

Performance Improvement Solutions

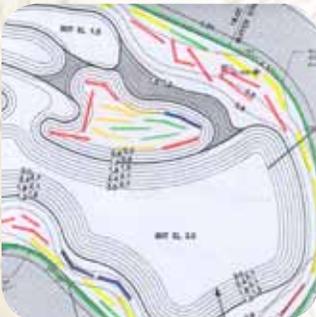
State of Knowledge Reports



Timely and current information allows businesses to operate effectively within the environmental and regulatory climate.

State of Knowledge Reports are invaluable. They synthesize current scientific and environmental information and identify important knowledge gaps. When you identify gaps before a project is underway, you can flag areas where research, reconnaissance or recommendations from experts is needed and this puts you a step ahead of the competition. A State of Knowledge Report:

- helps you minimize problems on the ground;
- highlights areas in the process that may need altering; or
- indicates the implications of specific actions.



State of Knowledge Reports compiled by Native Plant Solutions (NPS) experts offer practical insights and environmental solutions based on sound science.

Workshops

Third-party workshops led by people with scientific and on-the-ground experience complement in-house training to meet your needs. Your staff will gain a better understanding of the landscape they are working in and will have the confidence to meet project goals after participating in a NPS workshop.

NPS workshops can be tailored to suit the current needs of your staff. Our topics range from the scientific to more technical subjects to general interest, are immediately applicable and include:

- soil classification and characterization;
- wetland ecology/management, classification and delineation;
- naturalized stormwater design and management; and
- naturalization using native grasses.

Our workshops can be particularly valuable to regulators. We can help them better understand wetland and native grassland systems and to identify what project success looks like on the ground. We offer on-site classroom and field-based workshops.

Why Native Plant Solutions?

NPS staff has extensive scientific and technical expertise in wetland, upland, aquatic and wildlife sciences. Our network of contacts within the scientific and technical community allows us to stay on top of leading-edge information and environmental solutions.

State of Knowledge Report: *Minimum Ecological Management (MEM) for Constructed Wetlands*



Project proponent: Aquatics Subgroup, Reclamation Working Group, Cumulative Environmental Management Association (CEMA), Alberta, Canada

Project description: Interest in enhancing wetland resources through wetland creation efforts remains a viable option for many industries in Canada. The science behind designing, building and managing constructed wetland systems however, is still not well understood in all regions. This report provided information on constructing new wetland systems in a way that management interventions can be kept to a minimum over the lifespan of the project.

A document was developed on lessons learned from marsh restoration projects within NPS and Ducks Unlimited Canada related to constructed wetlands. For constructed and restored wetlands, MEM calls for taking those actions (both early-on and after construction) that best provide for the long-term sustainability of natural hydrological cycles appropriate for the intended wetland type and characteristic of the region in which the wetland project is located. Taking the appropriate actions at the right time greatly reduces the need to intervene over the lifetime of a wetland project.

State of Knowledge Report: *Arctic Waterfowl*



Project proponent: Oceans North Canada

Study area: Marine areas west of Hudson Bay in the Canadian Arctic

Project description: A synthesis and summarization of our current knowledge on waterfowl populations in the Canadian Arctic west of Hudson Bay. The State of Knowledge Report prepared by NPS:

- ▀ determined where birds are located within marine areas;
- ▀ summarized how Arctic waterfowl are using these areas;
- ▀ identified how the information gained could be used to establish protected areas; and
- ▀ identified current information gaps.

Workshop: Maintaining the Function of Natural Wetlands in Urban Landscapes / Native Grass Establishment and Management in Urban Settings



Clients: Planning and Development Branch, Naturalized Areas, City of Saskatoon, Saskatchewan

Project description: Two workshops were held to help those involved with the process of urban growth and development (developers/municipal staff). The intent of the workshops were to recognize the parameters that must be considered when retaining or introducing wetlands within a development plan or undertaking re-vegetation or reclamation projects using native grass species. The workshop was crafted to address the following topics:

- the opportunity, and the considerations for, incorporating natural wetlands into urban landscapes;
- an overview on the types of wetlands in Saskatchewan, with a discussion on the importance of climate, topography, and surrounding land-use in wetland development and long-term function;
- wetland hydrology and the role of hydro-period in determining productivity/function and wetland type;
- wetland mitigation: the science behind mitigation ratios;
- naturalized vs. traditional stormwater approaches; and
- the incorporation of Minimal Ecological Management/Best Management Practices into project plans.



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Native Plant Solutions is a consulting branch of Ducks Unlimited Canada and draws on over 70 years of wetland and native grassland knowledge, research and restoration experience. We use sound science to restore and create sustainable landscapes.